

REMARKS

This application has been reviewed in light of the Office Action dated February 23, 2006. Claims 3, 15-18 and 19-25 are presented for examination, of which Claims 3, 19 and 23 are in independent form. Claims 3 and 16 have been amended to define still more clearly what Applicants regard as their invention. Claims 19-25 have been added to provide Applicants with a more complete scope of protection. Favorable reconsideration is requested.

Initially, Applicant has corrected the typographical error noted by the Examiner in Claim 16.

In the outstanding Office Action, Claims 13 and 15-18 were rejected under 35 U.S.C. § 102(b) as being anticipated by Japanese Patent Application Laid-Open 4-10569 (Hirano).

Independent Claim 3 is directed to an image pickup apparatus that comprises a photoelectric conversion area in which a plurality of pixels are two-dimensionally arranged in horizontal and vertical directions, each pixel including a photoelectric conversion element and an amplification element which amplifies a signal from the photoelectric conversion element to output the amplified signal. A plurality of first vertical output lines output sequentially signals from the pixels arranged in the vertical direction, and a plurality of second vertical output lines output sequentially signals from the pixels arranged in the vertical direction. A first horizontal output line outputs sequentially the signals from the first vertical output lines, and a second horizontal output line outputs sequentially the signals outputted from the second vertical output lines. The first horizontal output line, according to Claim 3,

is arranged on a side of a first side of the photoelectric conversion area, while the second horizontal output line is arranged on a side of a second side, which is opposite to the first in the vertical direction. A plurality of first load elements are provided, at least one of which is arranged to fix a direction of current flowing through each of the first vertical output lines, and a plurality of second load elements includes at least one that is arranged to fix a direction of current flowing through each of the second vertical output lines. The first load elements and the second load elements are arranged on sides opposite to each other with respect to the photoelectric conversion area.

Among other notable features of Claim 3, therefore, are a plurality of first load elements (e.g., 7) and a plurality of second load elements (e.g., 7) arranged so that at least one first load element is arranged to fix a direction of current flowing through each of a plurality of first vertical output lines, and at least one second load element is arranged to fix a direction of current flowing through each of a plurality of second vertical output lines.^{1/}

Hirano relates to an image pickup apparatus arranged so as to output signals from pixels in parallel from horizontal output lines (SL in Fig.1) arranged on opposite sides of a pixel area. In this connection, the Office Action refers to a capacitor Ct connected with a vertical signal output line (YL_n), as a load element corresponding to that recited in Claim 3, and argues that this capacitor controls a direction of current flowing. Applicant submits that this is not correct. The capacitor in question does not have a function of deciding a current flowing though a signal line. Rather, capacitor Ct is only charged by a pixel output via the

^{1/} It is of course to be understood that the claim scope is not limited by the details of this or any other particular embodiment that may be referred to.

vertical signal output line, and no direct current flows on the vertical signal output line. Again, the capacitor therefore has nothing to do with the function of deciding a direction of a current flowing on the signal line. Accordingly, Applicant believes that Claim 3 is allowable over *Hirano*.

Independent Claim 19 is directed to a photoelectric conversion apparatus that comprises a plurality of pixels arranged two-dimensionally, each including a photoelectric conversion element, means for amplifying a signal generated in the photoelectric conversion element, first signal lines for reading out signals from the pixels, and output terminals provided to output the signals on the first signal lines, the output terminals being arranged on opposite sides of an area in which the pixels are arranged. A plurality of current sources supply currents to the first signal lines, each current source being a portion of the amplifying means, and the current sources being arranged on opposite sides of the area.

Among other notable features of Claim 19 is that the claimed photoelectric conversion apparatus is arranged to include a plurality of current sources. This feature also is believed not to be taught or suggested by *Hirano*.

Independent Claim 23 is believed to be allowable over *Hirano* for the same reason as that advanced with regard to Claim 19.

A review of the other art of record has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as a reference against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration or reconsideration, as the case may be, of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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